Antibiotic Susceptibility Test

Developed by Bioguard, VETlabs Antibiotic Susceptibility Test simplifies the complicated procedures of traditional antibiotic susceptibility test. Skipping the step of bacteria isolation, the test provides results for veterinarians' reference in only 12-24 hours. It's easy and convenient to use in the clinic without outsourcing test.

PRODUCT SPECIFICATION



Well NO.	Antibiotics	Concentration (ug/mL)
A1 \ B1	Control	
A2 \ B2	Amoxicillin	8 \ 32
A3 \ B3	*Augmentin	8/4 \ 32/16
A4 × B4	**SXT	2/38 \ 8/152
A5 \ B5	Cefixime	1 \ 4
A6 · B6	Cefalexin	8 \ 32
A7 · B7	Cefazolin	8 \ 32
A8 \ B8	Doxycycline	4 \ 16
C1 · D1	Enrofloxacin	4 \ 16
C2 · D2	Ciprofloxacin	1 \ 4
C3 \ D3	Azithromycin	2 ` 8
C4 \ D4	Gentamicin	4 \ 16
C5 \ D5	Amikacin	16 \ 64
C6 \ D6	Clindamycin	0.5 \ 4
C7 、 D7	Imipenem	2 ` 8
C8 \ D8	Vancomycin	4 ` 32

*Augmentin = Amoxicillin/Clavulanic Acid **SXT = Trimethoprim/Sulfamethoxazole

CONTENTS

CONTENTS	4 TESTS /BOX	8 TESTS /BOX	
Test kits, contents: Plate, Media A(4 mL), Media B(1 mL), cap, swab, recording sheet	4	8	
Accessory card	1	2	
Colorimetric card	1	1	
Instruction manual	1	1	

SPECIMEN TYPE

- Applicable samples: Feces, urine, swabs of urogenital tract, pharynx, pus, wound.
- Non-applicable samples: Pleural effusion, ascites, blood, tissues, samples removed by surgery, non-biological surgical instruments or consumables.
- Requirement: To avoid contamination, it requires aseptic operations. Specimens should be processed in 2 hours at room temperature after being taken. (Specimens can be processed in 24 hours at 2-8°C)

STEPS

- 1) Remove the test plate and media A from box and put them at room temperature.
- 2) Media preparation:
 - a.) Swabs, feces and pus: Take sample by a sterile swab. Insert the specimen swab into the media A. Dissolve the specimen in the media by agitating it. Once it's done, remove the swab. (Feces and pus need fewer samples than the others) Apply the well-mixed media into the plate after 1 min.
 - b.) Urine: Add 0.5 mL urine into media A or add 0.5 mL of sediment after centrifuging urine to increase positive rate. Remove 0.5 mL media from media A after mixing it well.
 - c.) Increase the amount of bacteria in samples (Preincubate):
 - For samples with unknown or low bacterial counts, you can increase the positive rate in the following ways: Take media B at room temperature. Take sample by a sterile

swab or one drop urine into media B. Put media B into the incubator(35-37°C) for 12-16 hours, then take one drop media B into media A.

- 3) Place the test plate horizontally on a clean surface. Add all the media into the plate through the well. (Avoid large particles or residues, which may affect the flow.)
- 4) Lean the plate at least 45 degree to let the liquid flow from right side (well) to left side (sponge). The excess media should be absorbed by the sponge. Seal the plate with the cap immediately.
- 5) Put the plate into the incubator (35-37°C). Interpret the results when the color of the control well becomes dark and muddy. It usually takes about 12-24 hours.



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INTERPRETATION

- 1) Make the plate vertical and turn the bottom side up.
- Match the accessory card with the plate, observe the colors in each well.
- 3) Compare the results with reference (See below).
- 4) Record the result on the form.

PS.

*Use the Colorimetric card as reference if it's difficult to interpret the results. Use 0-4 as clear, 5-9 as muddy instead. However, the clearest one should be the top priority for the administration.

*Can't rule out the possibility of undetectable or no bacteria in the samples if the results of all wells are clear. Recommend interpreting the results when the control well is above 5.





 Turn the bottom side up. (Sample well up, sponge down)





Observe the colors after

aligning the accessory card.

3 Reference:



Example	High concertation (B & D)	Low concertation (A&C)	Interpretation	
Ciprofloxacin	Clear	Clear	Recommended for use	
Amoxicillin	Muddy	Muddy	Not recommended for use	
Azithromycin	Clear	Muddy	High dose is recommended	
Augmentin	Muddy	Clear	Uninterpretable	

4 Record the result.

Patient NO			Owner Nam	xe		
Pet Name			Pet breed			
Pet Gender	Male 🗌	Male Female Pet Age				
Pet Species	Dog [Dog Cat Other				
Sample typ	Urine(Cathete	Bladder a	spirated urine	Othe	
Well NO.	Other(Results	Well NO.	Antibiotics	Resul	
C1 - D1	Enrofloxacin		A1 - B1	Control		
C2 - D2	Ciprofloxacin		A2 · B2	Amoxicillin		
C3 - D3	Azithromycin		A3 - B3	Augmentin		
C4 - D4	Gentamicin		A4 - B4	SXT		
C5 - D5	Amikacin		A5 - B5	Ceftxime		
C6 - D6	Clindamycin		A6 - B6	Cefalexin		
C7 - D7	Imipenem		A7 - B7	Cefazolin		
C8 - D8	Vancomycin		A8 - 88	Doxycycline		
C8 - D8 i: Susceptible, Rec i: Resistant, Not re i: Intermediate, Hig The text is for vet clinical informati	Vancomycin ommended for use commended for use h dose is recommen ensary use and inv	itro diagnosis diagnostic me	A8 - B8 reference only. W	Doxycycline terinarians should e definitive diagnor	aho u is in p	

STORAGE

- The kits should be stored between 2-8°C. DO NOT FREEZE
- Do not store the test kit in direct sunlight.
- The test kits are stable for 12 months until the expiration date on the box.

PRECAUTIONS

- The media should not be used if it is muddy or with precipitation.
- The test is for in vitro diagnosis only and disposable.
- For best results, please strictly follow the instructions and use it before the expiraton date.
- To increase the accuracy of the test, collect specimen correctly and apply to the media immediately. In addition, operate the test aseptically during the entire process.
- Due to the unevenly distributed or less bacteria in the samples, wells may be filled with unequal amounts of bacteria. If it happens, the results are uninterpretable because bacteria only grow in the high concentration wells. Please redo the test or discard this antibiotic.
- Once the test is finished, please properly discard all specimens and kits in accordance with Good Laboratory Practice (GLP).

LIMITATION

- The amount of bacteria in specimen will affect the accuracy of the test. For the specimen with less bacteria (e.g. urine, pleural effusion, ascites), directly go to the step of media preparation or do the test after amplifying it. On the other hand, the specimen with more bacteria (e.g. pus, feces, swabs of wound) may have to dilute it before the test.
- The sensitivity of the test within 24 hours is 10³ cfu/mL, some results may be difficult to interpret due to the growth rate and the metabolic rate of different bacteria.



The test is an in vitro diagnosis kit for veterinarians use, just for reference only, and **it is not able to exclude all the possibility of false results caused by various factors.** Hence, besides the results from test kits, veterinarians should also consider other clinical information and laboratory diagnostic methods to make the definitive diagnosis in practice.

